

## External wall - awsopi01a-02

external wall, timber frame construction, not ventilated, with dry lining, with rendering, other surface

### Performance rating

<b>Fire protection performance</b>	<b>REI from inside</b>	60
	<b>REI from outside</b>	90

From outside inwards REI 90; maximum ceiling height = 3 m; maximum load  $E_{d,fi}$  = 16,8 kN/lfm  
 Classified by HFA

<b>Thermal performance</b>	<b>U</b>	0.09 W/(m <sup>2</sup> K)
	<b>Diffusion</b>	suitable

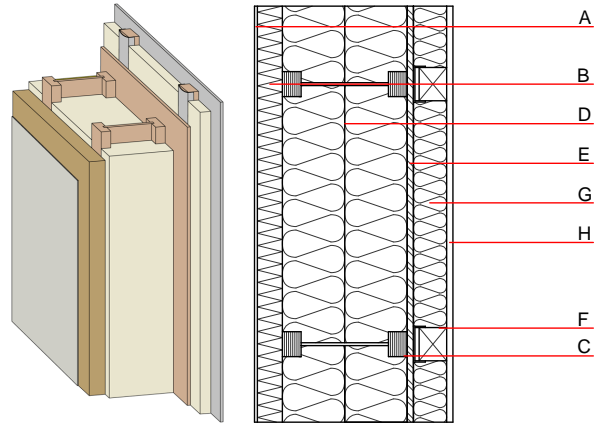
The stated thermal characteristics in the product data sheet are specified for the hard board intermediate web; the flanges are calculated with solid wood.  
 Calculated by HFA

<b>Acoustic performance</b>	<b>R<sub>w</sub> (C;C<sub>tr</sub>)</b>	57 dB
	<b>L<sub>n,w</sub> (C<sub>i</sub>)</b>	

without resilient clips  $R_w \geq 54$  dB  
 Assessed by HFA

<b>Mass per unit area</b>	<b>m</b>	63.10 kg/m <sup>2</sup>
---------------------------	----------	-------------------------

Calculation based on gypsum plaster board type DF



### Register of building materials used for this application, cross-section (from outside to inside, dimensions in mm)

	Thickness	Building material	Thermal performance				Reaction to fire EN
			$\lambda$	$\mu$ min – max	$\rho$	c	
A	7.0	plaster	1.000	10 - 35	2000	1.130	A1
B	60.0	wood-fibre insulation board [045; 190]	0.045	5 - 7	190	2.100	E
C	300.0	Light composite wood-based beams (I-beams) with solid wood flanges (60/45) and hard board intermediate web ( $\geq 6,7$ ) $e=625$	0.400	20 - 30	800	1.700	D
D	300.0	mineral wool [034; 18; <1000°C]	0.034	1	18	1.030	A1
E	15.0	OSB	0.130	200	600	1.700	D
F	80.0	spruce wood battens on resilient clips (50/80; $e=625$ )	0.120	50	450	1.600	D
G	80.0	mineral wool [034; 18; <1000°C]	0.034	1	18	1.030	A1
H	15.0	gypsum plaster board type DF or	0.250	10	800	1.050	A2
H	15.0	gypsum fibre board	0.320	21	1000	1.100	A2

### Sustainability rating (per m<sup>2</sup>)

#### Database ecoinvent

<b>OI3<sub>Kon</sub></b>	48.2
--------------------------	------

Calculated with gypsum plaster fire protection board (GKF/DF) and silicate plaster  
 Calculated by HFA

## Details of sustainability rating

### Database ecoinvent

Lifecycle (Phases)	GWP [kg CO <sub>2</sub> -e.]	AP [kg SO <sub>2</sub> -e.]	EP [kg PO <sub>4</sub> -e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]	
A1 - A3		0.194	0.088	3,85E-6	0.026	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	88.716	471.940	560.656	676.707	29.112	705.819